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**A5R REHT**

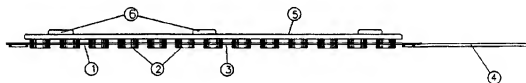
(56) Documents Cited  
 GB 2218908 A EP 0766954 A1 EP 0036910 A1  
 US 5179944 A US 5176134 A US 5065758 A  
 US 4676247 A US 4592358 A  
 Abstract of CH673218 (TONIOLO)

(58) Field of Search  
 UK CL (Edition Q) A5R REHT  
 INT CL<sup>6</sup> A61F 7/00 7/02 7/03 7/08 7/10  
 ONLINE:WPI, EPDOC, JAPIO

(54) Abstract Title  
**Hot or cold bandage**

(57) A rectangular bandage 1 is constructed from strong light conductive material which contains compartments 2 serially located with gaps 3 to allow a sort of hinge mechanism/flexibility for ease of use and comfort to patient. The bandage is releasably secured to the patient with straps 4. An inner pad 5 can be attached to the inside of the bandage with optional washable and removable aromatherapy/medical patches 6. The bandage and the patches are reusable. The bandage and inner pad/lining may be textured to assist in traction or adhesion.

Fig 2



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## Hot or Cold Bandage / Bag

Fig 1

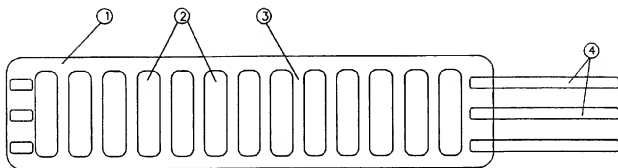
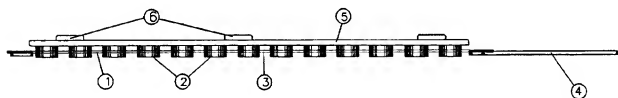


Fig 2



## HOT OR COLD BANDAGE/BAG

The areas of use of the hot or cold bandage extend from medicine veterinary alternative medicine and physiotherapy applications to sports health applications. It is to relieve or treat muscular injury stress and tension by the application of heat and/or cold through the medium of a heated or cooled bag/bandage /strap.

Placing an ice pack to the affected area may treat muscular trauma (e.g. motor accidents and sports injuries). Hospitals use electrically heated pads for treatment of muscular conditions. A simple all/multipurpose hot and/or cold bandage/strap/bag would apply to all these uses.

The hot and/or cold bandage works on the basis of the application of heat/cold in close proximity to the affected area. This is applied through a heated /cooled bandage which is made of a material which conducts heat/cold to varying degrees of efficiency (depending on treatment recommended) the heat/cold retaining properties being in the form of compartments containing conductive material capable of retaining heat/cold. The bandage could be heated by immersing in hot water, placing in a microwave oven for a short period of time or by being placed on a radiator. Immersing in cold water or ice or being placed in a fridge or freezer could cool the bandage. The bandage would be reusable and secured to the affected area by straps (by e.g. simple knots/buckles/Velcro fastening). The bandage also offers the addition of a removable pad to be attached to the inner side after heating. This will allow a more even dispersment of heat and prevent scolding of the wearer. The bandage inner pad and / or the surface of the bandage itself may be textured so as to assist in the traction and adhesion to the affected area and / or to assist in the physical manipulation of the affected area (by massage). A single or number of washable / replaceable patches that can administer aromatherapy chemicals directly to the skin can be attached to the inner pad. As the blood rises to the surface of a heated area, the chemicals will be absorbed more readily.

The bandage will be constructed with appropriate sized compartments that allow the bandage to be wrapped securely and relatively evenly around the affected area. The designs will include rectangular shaped bandages with a series of rectangular compartments (or other angular shapes for application to bent elbows knees etc.).

### EXAMPLE.

See diagram.

A rectangular bag/bandage made from heat/cold resilient material capable of conducting heat/cold (e.g. strong, thin water resistant fabric such as Gore-Tex); comprising compartments which are filled with material which has the properties of retaining heat and/or cold (e.g. glass beads). The bandage is secured to the affected area by two straps. The compartments are arranged serially in this case so as to allow it to be wrapped easily around a leg or arm for example (caterpillar tracks/metal watch straps help demonstrate the idea behind this concept). An inner pad (to prevent scolding and optionally textured as referred to above) can be attached by Velcro when the bandage is heated. Removable and replaceable / washable patches (for the application of aromatherapy treatments / medicine) fastened also by Velcro may be added and applied to the inner pad or bandage surface to be in contact with the affected area.

## **CLAIMS**

Claim 1.

A free bandage of compartments for applying heat or cold to affected areas of muscular pain injury or tension, with the option of being secured by straps, using compartments in bandage for ease of wrapping or otherwise moulding to contours of affected area.

Claim 2.

As claim 1 but for the application of 'cold' treatments only.

Claim 3.

As claim 1 but for the application of 'hot' treatments only.

Claim 4.

As claim 1 but including construction of bandage from strong conductive material and which can be reused a number of times.

Claim 5.

As claim 4 but including filling material capable of withstanding being repeatedly heated in microwave oven and/or radiator and/or hot and cold water.

Claim 6.

As claim 4 but including filling material capable of withstanding being repeatedly cooled in ice, cold water or a fridge/freezer.

Claim 7.

As Claim 4 but including removable and washable inner pad to prevent scolding

Claim 8.

As claim 1 but including removable and/or washable patch for application of aromatherapy or medicine.

Claim 9.

As Claim 1 but including an option for a facility for applying aromatherapy/medicine simultaneously.

Claim 10.

As Claim 8 but for the application of 'cold' treatments only.

Claim 11.

As claim 8 but for the application of 'hot' treatments only.

Claim 12.

As Claims 1 through to 11 but including the bandage inner pad and / or the surface of the bandage itself being textured to assist in traction and adhesion and physical manipulation.



Application No: GB 9907939.4  
Claims searched: 1-12

Examiner: Anwar Gilani  
Date of search: 27 July 1999

## Patents Act 1977

### Search Report under Section 17

#### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.Q): A5R (REHT)

Int Cl (Ed.6): A61F 7/00, 7/02, 7/03, 7/08, 7/10

Other: Online: WPI, EPODOC, JAPIO

#### Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X,Y	GB2218908 A	(SU-MED) p.1 1.2-7, p.2 1.10-17, p.3 1.28-p.4 1.2, p.5 1.17-23	X:1,2,4,6; Y:9 at least
X,Y	EP0766954 A1	(KIRSCHKE) figures and abstract	1-6 and 9 at least
X,Y	EP0036910 A1	(HOPE) p.2 1.14-p.3 1.9	X:1,2,4,6; Y:9 at least
X,Y	US5179944	(MCSYMYTZ) whole document particularly col.3 1.33-col.5 1.13	X:1-7; Y:9 at least
X,Y	US5176134	(HUDSON) col.1 1.46-55, col.2 1.10-23	X:1,3,4,5; Y:9 at least
X,Y	US5065758	(WHITEHEAD ET AL) col.2 1.32-53	X:1,3,4,5; Y:9 at least
X,Y	US4676247	(VAN CLEVE) col.3 1.30-col.54, col.4 1.1-12, col.7 1.20-29	X:1-6; Y:9 at least
X,Y	US4592358	(WESTPLATE) whole document	X:1-6; Y:9 at least

X Document indicating lack of novelty or inventive step  
Y Document indicating lack of inventive step if combined with one or more other documents of same category.

A Document indicating technological background and/or state of the art.  
P Document published on or after the declared priority date but before the filing date of this invention.  
E Patent document published on or after, but with priority date earlier than, the filing date of this application.

& Member of the same patent family



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Category	Identity of document and relevant passage	Relevant to claims
Y	Abstract of CH673218 (TONIOLO) see abstract and figure	9 at least

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
		E	Patent document published on or after, but with priority date earlier than, the filing date of this application.
&	Member of the same patent family		